

# Some Legal & Policy Considerations on Externality Valuation

---

Eugene M. Trisko  
Attorney at Law

DOE/NETL Externalities Workshop  
Vienna, Virginia  
February 20-21, 2003



# Emission allowances are monetized externalities

---

An allowance saved is a ton not emitted...

- Conventional externality valuation theory looks to marginal cost of control or avoided environmental damages
- Market-based allowance prices are determined primarily by the marginal cost of control (e.g., SO<sub>2</sub> @ \$150, NO<sub>x</sub> @ \$2000)
- Legislative or regulatory emission caps reflect societal decisions on acceptable residual damage levels
- Allowance trading has supplanted externality theory as means to value emissions

# Institutional contexts have changed

---

Who applies the “adders” in a restructured market?

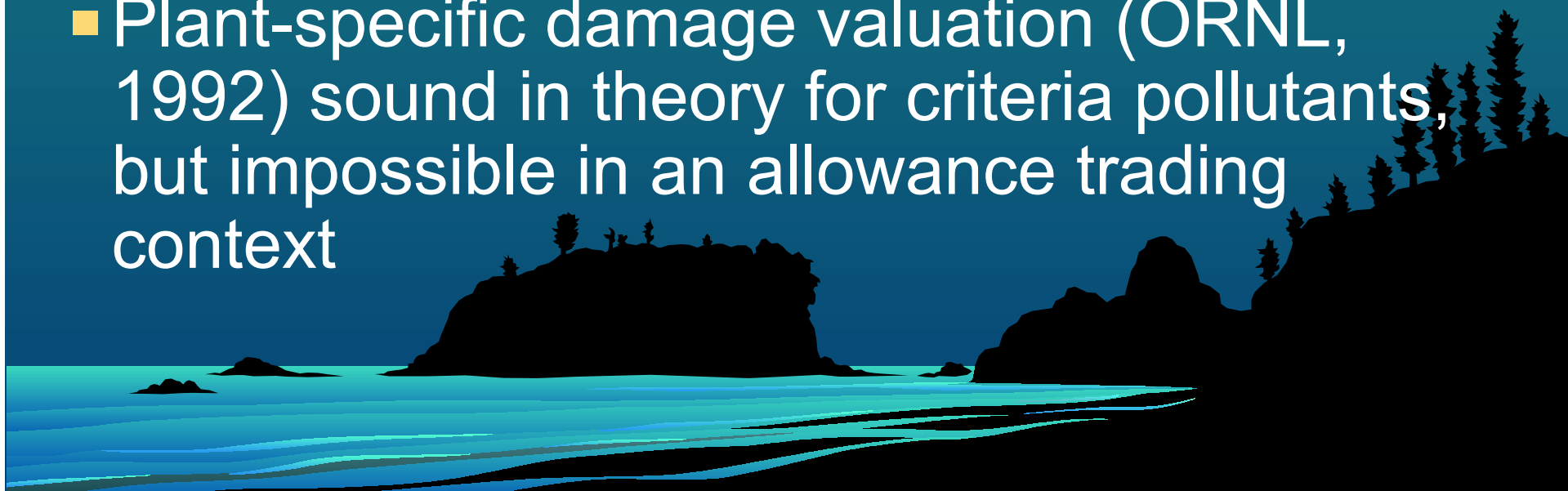
- Traditional externality applications depend on regulatory mechanisms for quantification and application - through least cost planning processes, etc.
- State restructuring has eliminated prudency reviews, LCP, other forums
- Monetized allowance prices are reflected in plant dispatch

# Marginal damage valuation trumped by market efficiencies

---

New York litigation lesson...

- Cost savings from market trading facilitated by geographic freedom (CAMG v. Pataki, 2002)
- Plant-specific damage valuation (ORNL, 1992) sound in theory for criteria pollutants, but impossible in an allowance trading context



# PM marginal damage calculations: not ready for prime time

---

Leaving aside causation...

- R2 of current PM models (CMAQ, REMSAD, CAM-XP beta) versus monitored data ~0.15 for nitrates, ~0.45 for sulfates
- Sensitivity tests show increased PM2.5 concentrations with lower emissions
- Severe emission inventory uncertainties outside the utility (CEM) sector
- Modeling summary comparisons at [www.ladco.org](http://www.ladco.org)

# ICC Externalities Decision

---

Rejects Anticipated Costs of Control

- Illinois Commerce Commission rejected staff proposal for LCP inclusion of future environmental control costs, and intervenor marginal cost of control proposal
- Insufficient evidence to support either approach
- Cannot quantify costs of unenacted legislation - lesson for carbon!

# Full consideration of externalities

---

## The Klein/Keeney Challenge

- Externality analysis must consider offsetting social costs of environmental policies
- Take Kyoto: 40%-60% reduction of coal use, 1+ MM job losses, 1%+ GDP loss
- Valuing secondary health, unemployment and social impacts of large policy initiatives challenges externality theory and practice
- For example: What is the existence value of a community? A well paying industrial job?